

A NEW SPECIES OF THE FERN GENUS *DORYOPTERIS* (PTERIDACEAE) FROM SOUTHEASTERN BRAZIL

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ABSTRACT

Doryopteris jequitinhonhensis Salino, known only from Minas Gerais, Brazil, is described and illustrated. The new species belongs to Section *Doryopteris* due to the stipes with one vascular bundle at the base and areolate venation. *Doryopteris jequitinhonhensis* is apparently more close to *D. trilobata* J. Prado (Bahia, Brazil) and *D. cordifolia* (Baker) Diels (Madagascar) because of deeply 3-lobed lamina of its fertile fronds, the lanceolate lobes with an acute apex, the apical much larger than the basal lobes. *Doryopteris jequitinhonhensis* differs from both species by sterile leaves with margin hyaline, not sclerified, usually crenate, and petiole puberulous, with trichomes up to 0.1 mm long, with isodiametric cells. From *D. cordifolia* differs by fronds with margins not sclerified and absence of proliferous buds; from the *D. trilobata* differs by rhizome erect to decumbent and petiole sulcate adaxially.

KEY WORDS: Pteridaceae, *Doryopteris*, Minas Gerais, Brazil

RESUMO

Doryopteris jequitinhonhae Salino que é conhecida apenas de Minas Gerais, Brasil é descrita e ilustrada. A nova espécie pertence à Seção *Doryopteris* por possuir a base do pecíolo com um feixe vascular e venação areolada. *Doryopteris jequitinhonhensis* é aparentemente mais próxima de *D. trilobata* J. Prado (Bahia - Brasil) e *D. cordifolia* (Baker) Diels (Madagascar) pela lâmina fértil trilobada, lobos lanceolados com ápice agudo e lobo apical maior que os lobos basais. *Doryopteris jequitinhonhensis* difere pela fronde estéril com margem não cartilaginosa, geralmente crenada e pecíolo puberulento com tricomas até 0.1 mm de comprimento e com células isodiamétricas. Difere também de *D. cordifolia* pela ausência de gemas na base da lâmina estéril, e de *D. trilobata* pelo caule ereto ou decumbente, e pecíolo sulcado adaxialmente.

PALAVRAS CHAVE: Pteridaceae, *Doryopteris*, Minas Gerais, Brazil

INTRODUCTION

Doryopteris is a genus of about 30 species mostly of the southeastern Brazilian Highlands, with five endemic to Madagascar and one pantropical (Mickel & Smith 2004). Besides an early revision by Tryon (1942) and the surveys of Brade (1965), Tryon (1962) and Sehnem (1972), nothing more on the taxonomy of the Brazilian species of the *Doryopteris* has been published, except a new endemic species from the Cadeia do Espinhaço by Prado (1993), and a new species from the Atlantic forest (Yesilyurt 2007).

TAXONOMIC TREATMENT

Doryopteris jequitinhonhensis Salino, sp. nov. (**Fig. 1**). TYPE: BRAZIL. MINAS GERAIS: Salto da Divisa, fazenda Santana, ao longo do riacho da Penha (afluente do rio Jequitinhonha), 134 m alt., 16° 03'41.5"S, 40°03'23.5"W, 04 Mar 2004, A. Salino, J.A. Lombardi, R.C. Mota, T.E. Almeida & P.L. Viana 9425 (HOLOTYPE: BHCB).

Plantae terrestres. Rhizoma erectum vel decumbens. Frondes dimorphae et membranaceae; frons sterilis 3.3–5.9 × 0.9–1.95 cm; frons fertilis 9–10 × 0.75–0.82 cm; petiolus semi-cylindricus, sulcatus in facie adaxiali; lamina sterilis integra, oblonga vel obovata, ad basin cordata vel sagitata, margine non cartilaginea, crenata, rare integra; lamina fertilis hastata vel trilobata. *Doryopteri cordifoliae* (Baker) Diels et *D. trilobatae* J. Prado similis, ab eis fronde sterili margine non cartilaginea, generaliter crenata et petiolo puberulento trichomatibus ad 0.1mm longa munito differt. A *D. cordifolia* absentia gemmarum base laminae sterilis distat et a *D. trilobata* rhizomate erecto vel decumbenti, et petiolo sulcato adaxialiter distat.

Plants terrestrial. **Rhizome** erect to decumbent; scales linear to linear-lanceolate, with acute to acuminate apex, 1–1.3 mm long, with sclerified dark brown band, margin hyaline. **Fronds** dimorphic, erect; sterile frond 3.3–5.9 × 0.9–3 cm, fertile frond 9–10 × 1.5–3 cm; petiole semi-terete, adaxially sulcate, 17–28 ×

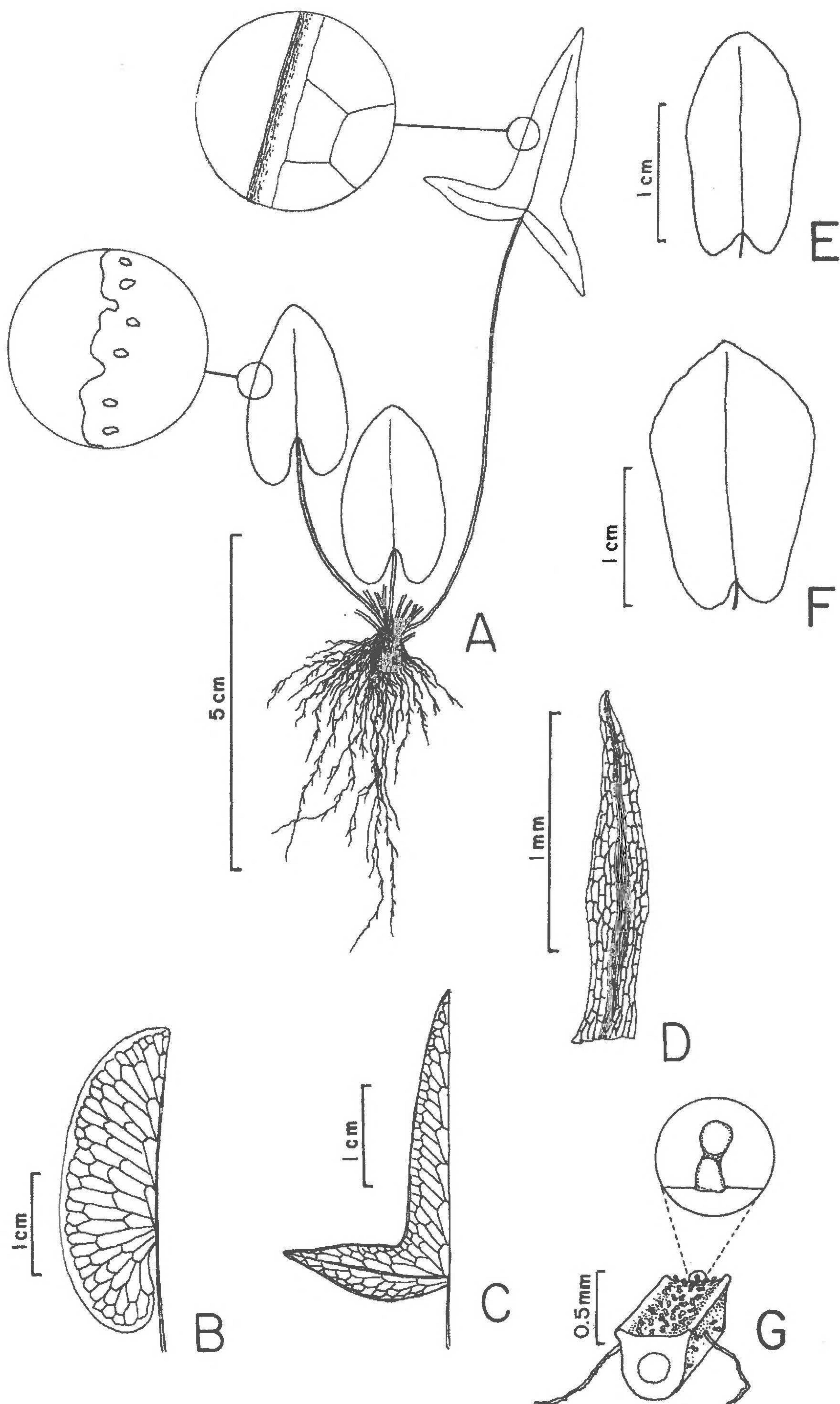


FIG. 1. *Doryopteris jequitinhonhensis*. A. Habit and details of the margins of the sterile and fertile fronds showing hydathodes and venation, respectively. B. Venation of the sterile frond. C. Venation of the fertile frond. D. Rhizome scale. E. Sterile frond. F. Sterile frond. G. Portion of petiole showing adaxial groove, one cylindrical vascular bundle, ciliate trichomes on lateral surface and capitate trichomes mainly on adaxial groove, and detail of the capitate trichome (from Salino et al. 9425, BHCB).

0.38–0.58 mm in the sterile fronds, and 65–70 × 0.6–0.7 mm in fertile fronds, dark brown with one cylindrical vascular bundle at the base, basal scales (sometimes into the apical part) similar to those of the rhizome, but with or without sclerified dark brown central band, puberulous, trichomes capitate, up to 3-celled, and up to 0.1 mm long, light brown on adaxial surface, and with ciliform trichomes, 0.7–1.5 mm long on lateral surfaces; lamina of the sterile frond entire, oblong or obovate with deeply cordate base or, sagitate, apex obtuse, rounded or acute, margin hyaline, not sclerified, usually crenate, rarely entire; hydathodes present on the upper surface; lamina of the fertile frond hastate, deeply 3-lobed, lobes entire, lanceolate, apex acute, margin revolute, apical lobe larger than basal lobes, basal lobes forming a right angle to the apical lobe, lamina of the both types of frond membranaceous to papyraceous, glabrous on both surfaces or glabrescent on adaxial surface, trichomes ciliform, light brown, venation completely areolate on both types of fronds without enclosed veinlets, and usually without free veins near the margin. **Sorus** marginal in vascular commissure, continuous, including the sinus region, absent at the apex of the lobes; indusium formed by the revolute margin; spores trilete, tetrahedral-globose, castaneous, sparsely cristate.

Etymology.—The specific epithet refers to the occurrence of the species only in the forest along the Jequitinhonha River in Brazil.

Doryopteris jequitinhonhensis belongs in section *Doryopteris* due to the petioles with one vascular bundle at base and areolate venation. *Doryopteris jequitinhonhensis* is apparently closely related to *D. trilobata* J. Prado (from Bahia, Brazil) and *D. cordifolia* (Baker) Diels (from Madagascar) mainly in the deeply 3-lobed form of the lamina of its fertile fronds, the lanceolate lobes with an acute apex, the apical much larger than the basal lobes, and in the cordiform base of the sterile lamina. *Doryopteris jequitinhonhensis* differs from both species by sterile leaves with margin hyaline, not sclerified, usually crenate, and petiole puberulous, with capitate trichomes up to 0.1 mm long. From the *D. cordifolia* differs by fronds with margins not sclerified and absence of proliferous buds; from the *D. trilobata* differs by rhizome erect to decumbent and petiole sulcate adaxially.

In the general aspect (habit and shape of the sterile frond) *D. jequitinhonhensis* resembles *D. rufa* Brade, but this species has fronds that are coriaceous with free venation, and belongs to the section *Lytoneuron*. An identification key is presented to distinguish *D. jequitinhonhensis* from other similar Brazilian species.

Distribution.—Known only from the type collection from a population with about 30 individuals growing only along stream banks inside the deciduous forest in lowlands (100–170 m). *Doryopteris trilobata* and *D. rufa* grow in open rocky habitats in the highlands (1200–1500 m).

KEY TO SPECIES *DORYOPTERIS* OF SOUTHEASTERN BRAZIL

SIMILAR TO *DORYOPTERIS JEQUITINHONHENSIS*

1. Venation of both sterile and fertile fronds free; rhizome scales with apex filiform _____ **D. rufa**
1. Venation of both sterile and fertile fronds areolate; rhizome scales with apex acute to acuminate.
 2. Rhizome erect to decumbent; petiole semi-terete, sulcate adaxially, puberulous with capitate trichomes up to 0.1 mm; fronds membranaceous with margins not sclerified, usually crenate _____ **D. jequitinhonhensis**
 2. Rhizome short-creeping; petiole terete without capitate trichomes up to 0.1 mm; fronds coriaceous with margins sclerified and entire _____ **D. trilobata**

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